



State of Washington  
REPORT OF EXAMINATION  
FOR WATER RIGHT CHANGE

WR File NR CG2-00174@2  
WR Doc ID 6367015

Changed Place of Use\*  
Added or Changed Purpose of Use\*  
Added or Changed Point of Withdrawal/Diversion  
\* acknowledges changes made with passage of Municipal Water Law

PRIORITY DATE

December 15, 1969

WATER RIGHT NUMBER

CG2-00174@2

MAILING ADDRESS

North Beach Water District  
25902 Vernon Ave., Suite C  
Ocean Park, WA 98502

SITE ADDRESS (IF DIFFERENT)

Parcel 1211331300 – no apparent street address  
Equivalent to intersection of 252<sup>nd</sup> Street and Y Lane if  
extended to the property

Total Quantity Authorized for Withdrawal or Diversion

	UNITS	ANNUAL QUANTITY (AC-FT/YR)
500	GPM	168

Purpose

PURPOSE	WITHDRAWAL OR DIVERSION RATE			ANNUAL QUANTITY (AF/YR)		PERIOD OF USE (mm/dd)
	ADDITIVE	NON- ADDITIVE	UNITS	ADDITIVE	NON-ADDITIVE	
Municipal	500	0	GPM	168	0	01/01-12/31

IRRIGATED ACRES		PUBLIC WATER SYSTEM INFORMATION	
ADDITIVE	NON-ADDITIVE	WATER SYSTEM ID	CONNECTIONS
		63000	

Source Location

COUNTY	WATERBODY		TRIBUTARY TO			WATER RESOURCE INVENTORY AREA		
Pacific	groundwater		Pacific Ocean			24		

SOURCE	PARCEL	WELL TAG	TOWNSHIP	RANGE	SECTION	QQ Q	LATITUDE	LONGITUDE
Wiegardt Well 1		BAF 021					46.48636	124.04033
Wiegardt Well 2	1211331300	BAF 024	12N	11W	33	SW/NE	46.48596	124.04027
Wiegardt Well 3		BAF 025					46.48558	124.04029

Datum: NAD83/WGS84

Place of Use (See Attached Map)

LEGAL DESCRIPTION OF AUTHORIZED PLACE OF USE

The place of use (POU) of this water right is the service area described in the most recent Water System Plan/Small Water System Management Program approved by the Washington State Department of Health, so long as the water system is and remains in compliance with the criteria in RCW 90.03.386(2). RCW 90.03.386 may have the effect of revising the place of use of this water right.

If the criteria in RCW 90.03.386(2) are not met, the POU of this water right reverts to the last POU described by Ecology in a water right authorization.

#### **Proposed Works**

Wiegardt Well 1: 8-inches in diameter and 175-foot deep, screened from 120 and 140 feet below ground surface (bgs).

Wiegardt Well 2: 8-inches in diameter and 150 foot deep, screened from 120 and 140 feet bgs.

Wiegard Well 3: 8-inches in diameter and 173-foot deep, screened from 121 and 142 feet bgs.

Wells used in a wellfield configuration.

#### **Development Schedule**

BEGIN PROJECT Started	COMPLETE PROJECT January 1, 2019	PUT WATER TO FULL USE January 1, 2030
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#### **Measurement of Water Use**

How often must water use be measured?	Monthly
How often must water use data be reported to Ecology?	Annually
What volume should be reported?	Total Annual Volume (acre feet)
What rate should be reported?	Annual Peak Rate of Withdrawal (gpm)

#### **Provisions**

##### ***Wells, Well Logs and Well Construction Standards***

All wells constructed in the state must meet the construction requirements of WAC 173-160 titled "Minimum Standards for the Construction and Maintenance of Wells" and RCW 18.104 titled "Water Well Construction". Any well which is unusable, abandoned, or whose use has been permanently discontinued, or which is in such disrepair that its continued use is impractical or is an environmental, safety or public health hazard must be decommissioned.

The well must be capped upon completion, and the Department of Ecology must be notified in order that a video scan of the completed well can be conducted. The Department of Ecology must be notified within one week of completion of the well and prior to the setting of a pump, in order to make necessary arrangements for video scanning.

All wells must be tagged with a Department of Ecology unique well identification number. If you have an existing well and it does not have a tag, please contact the well-drilling coordinator at the regional Department of Ecology office issuing this decision. This tag must remain attached to the well. If you are required to submit water measuring reports, reference this tag number.

Installation and maintenance of an access port as described in WAC 173-160- 291(3) is required.

##### ***Measurements, Monitoring, Metering and Reporting***

An approved measuring device must be installed and maintained for each of the sources identified by this water right in accordance with the rule "Requirements for Measuring and Reporting Water Use", WAC 173-173.

Department of Ecology personnel, upon presentation of proper credentials, must have access at reasonable times, to the records of water use that are kept to meet the above conditions, and to inspect at reasonable times any measuring device used to meet the above conditions.

WAC 173-173 describes the requirements for data accuracy, device installation and operation, and information reporting. It also allows a water user to petition the Department of Ecology for modifications to some of the requirements.

#### ***Chloride Monitoring***

By January 31<sup>st</sup> of each year, the April and September measurements from the subject well(s) must be submitted in writing to the Department of Ecology, including:

- Chloride and conductivity (the chemical analysis must be performed by a state-accredited laboratory)
- Depth to static water level (with pump off long enough to allow for stabilization)
- The chloride/conductivity sampling and the static water level measurement must be conducted concurrently.

This data collection will assist the applicant and Ecology in determining if actions are necessary to prevent an increasing trend in chloride concentrations (an indicator of seawater intrusion). Preventative actions may include – reducing the instantaneous pumping rate, reducing the annual volume pumped, scheduling pumping to coincide with low tides, raising the pump intake, and/or limiting the number of service connections.

#### ***Department of Health Requirements***

Prior to any new construction or alterations of a public water supply system, the State Board of Health rules require public water supply owners to obtain written approval from the Office of Drinking Water of the Washington State Department of Health. Please contact the Office of Drinking Water at Southwest Drinking Water Operations, 243 Israel Road S.E., PO Box 47823, Tumwater, WA 98504-7823, (360) 236-3030.

#### ***Water Use Efficiency***

Use of water under this authorization will be contingent upon the water right holder's maintenance of efficient water delivery systems and use of up-to-date water conservation practices consistent with established regulation requirements and facility capabilities.

#### ***Proof of Appropriation***

The water right holder must file the notice of Proof of Appropriation of water (under which the certificate of water right is issued) when the permanent distribution system has been constructed and the quantity of water required by the project has been put to full beneficial use. The certificate will reflect the extent of the project perfected within the limitations of the superseding permit. Elements of a proof inspection may include, as appropriate, the source(s), system instantaneous capacity, beneficial use(s), annual quantity, place of use, and satisfaction of provisions.

#### ***Schedule and Inspections***

Department of Ecology personnel, upon presentation of proper credentials, will have access at reasonable times, to the project location, and to inspect at reasonable times, records of water use, wells, diversions, measuring devices and associated distribution systems for compliance with water law.

**Findings of Facts**

Upon reviewing the investigator's report, I find all facts, relevant and material to the subject application, have been thoroughly investigated.

Therefore, I ORDER approval of Application No G2-00174@2, subject to existing rights and the provisions specified above.

**Your Right To Appeal**

You have a right to appeal this Order to the Pollution Control Hearings Board (PCHB) within 30 days of the date of receipt of this Order. The appeal process is governed by Chapter 43.21B RCW and Chapter 371-08 WAC. "Date of receipt" is defined in RCW 43.21B.001(2).

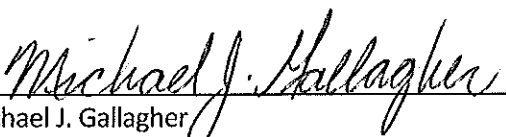
To appeal you must do the following within 30 days of the date of receipt of the Order:

- File your appeal and a copy of this Order with the PCHB (see addresses below). Filing means actual receipt by the PCHB during regular business hours.
- Serve a copy of your appeal and this Order to Ecology in paper form - by mail or in person. (See addresses below.) E-mail is not accepted.

You must also comply with other applicable requirements in Chapter 43.21B RCW and Chapter 371-08 WAC.

Street Addresses	Mailing Addresses
<b>Department of Ecology</b> Attn: Appeals Processing Desk 300 Desmond Drive SE Lacey, WA 98503	<b>Department of Ecology</b> Attn: Appeals Processing Desk PO Box 47608 Olympia, WA 98504-7608
<b>Pollution Control Hearings Board</b> 1111 Israel RD SW, Ste 301 Tumwater, WA 98501	<b>Pollution Control Hearings Board</b> PO Box 40903 Olympia, WA 98504-0903

Signed at Lacey, Washington, this 22<sup>nd</sup> day of October, 2015.

  
Michael J. Gallagher  
Water Resources Program/Southwest Region  
Department of Ecology

## INVESTIGATOR'S REPORT

Water Right Control Number CG2-00174@2

North Beach Water District

**BACKGROUND**

This report serves as the written findings of fact concerning Water Right Change Application Number CG2-00174@2.

The North Beach Water District (NBWD), formerly the Ocean Bay Water Company, is in need of new wells to produce their allocation from the subject water right. The NBWD intends to replace the existing points of withdrawal (South Wells 1 and 2) with the new Wiegardt Wellfield. The existing wells are old and have begun showing signs of declining production capacity.

As directed under RCW 90.03.560, this application also changes the place of use according to RCW 90.03.386 (2) and the purpose of use according to RCW 90.03.015(3) and (4).

Ground Water Certificate (GWC) G2-00174 was issued to the Ocean Bay Water Company on August 17, 1972. Throughout its history, the right has provided water to the Ocean Park community and its surrounding area.

**EXISTING Water Right Attributes**

<b>Issued to:</b>	Ocean Bay Water Company
<b>Priority Date:</b>	December 15, 1969
<b>Place of Use</b>	The plat of Rushton-on-the-Bay Farm Estates and South Addition to Ocean Park

County	Waterbody	Tributary To	WRIA
Pacific	groundwater	Pacific Ocean	WRIA 24

Purpose	Rate	Unit	Ac-ft/yr	Begin Season	End Season
Community Domestic	500	GPM	168	01/01	12/31

Source Name	Parcel	Well Tag	Twp	Rng	Sec	QQ Q	Latitude	Longitude
South Well 1	76019308000	AGP154	12N	11W	33	NE NE	46.48667	-124.037081
South Well 2	12113312120	AGP155				NW NE	46.48825	-124.041850

Datum: NAD83/WGS84

GPM = Gallons per Minute; Ac-ft/yr = Acre-feet per year; Sec. = Section; QQ Q = Quarter-quarter of a section; WRIA = Water Resource Inventory Area; E.W.M. = East of the Willamette Meridian

**REQUESTED Water Right Attributes**

<b>Applicant Name:</b>	North Beach Water District
<b>Date of Application:</b>	11-24-2014
<b>Place of Use</b>	The place of use (POU) of this water right is the service area described in the most recent Water System Plan/Small Water System Management Program approved by the Washington State Department of Health, so long as the water system is and remains in compliance with the criteria in RCW 90.03.386(2). RCW 90.03.386 may have the effect of revising the place of use of the water right.  If the criteria in RCW 90.03.386(2) are not met, the POU of this water right reverts to the last POU described by Ecology in a water right authorization.

<b>County</b>	<b>Waterbody</b>	<b>Tributary To</b>	<b>WRIA</b>
Pacific	groundwater	Pacific Ocean	WRIA 24

<b>Purpose</b>	<b>Rate</b>	<b>Unit</b>	<b>Ac-ft/yr</b>	<b>Begin Season</b>	<b>End Season</b>
Municipal	500	GPM	168	01/01	12/31

Source Name	Parcel	Well Tag	Twp	Rng	Sec	QQ Q	Latitude	Longitude
Wiegardt Well 1	12113313262	BAF021	12N	11W	33	SW/NE	46.48636	-124.04033
Wiegardt Well 2	12113313262	BAF024	12N	11W	33	SW/NE	46.48596	-124.04027
Wiegardt Well 3	12113313262	BAF025	12N	11W	33	SE/NE	46.48558	-124.04029

Datum: NAD83/WGS84

GPM = Gallons per Minute; Ac-ft/yr = Acre-feet per year; Sec. = Section; QQ Q = Quarter-quarter of a section; WRIA = Water Resource Inventory Area; E.W.M. = East of the Willamette Meridian

**Cost Reimbursement**

This application is being processed under a cost reimbursement agreement between the applicant the Department of Ecology. This report has been prepared by Robinson Noble, Inc.

**Legal Requirements for Requested Change****Public Notice**

RCW 90.03.280 requires that notice of a water right application be published once a week, for two consecutive weeks, in a newspaper of general circulation in the county or counties where the water is to be stored, diverted and used. Notice of this application was published in the Chinook Observer on May 20, 2015 and May 27, 2015. No protests were received as a result of this public notice.

**Consultation with the Department of Fish and Wildlife**

The Department must give notice to the Department of Fish and Wildlife of applications to divert, withdraw, or store water. There are no fishery related surface water features within the area of influence of the proposed new wells, so consultation with Department of Fish and Wildlife was not necessary.

**State Environmental Policy Act (SEPA)**

A water right application is subject to a SEPA threshold determination (i.e., an evaluation whether there are likely to be significant adverse environmental impacts) if one or more of the following conditions are met:

- It is a surface water right application for more than 1 cubic foot per second, unless that project is for agricultural irrigation, in which case the threshold is increased to 50 cubic feet per second, so long as that irrigation project will not receive public subsidies;
- It is a groundwater right application for more than 2,250 gallons per minute;
- It is an application that, in combination with other water right applications for the same project, collectively exceed the amounts above;
- It is a part of a larger proposal that is subject to SEPA for other reasons (e.g., the need to obtain other permits that are not exempt from SEPA);
- It is part of a series of exempt actions that, together, trigger the need to do a threshold determination, as defined under WAC 197-11-305.

None of the above conditions apply. Application CG2-00174@2 is, therefore, exempt from any SEPA action regarding this water right change.

***Water Resources Statutes and Case Law***

RCW 90.03.380(1) states that a water right that has been put to beneficial use may be changed. The point of diversion, place of use, and purpose of use may be changed if it would not result in harm or injury to other water rights. The Washington Supreme Court has held that Ecology, when processing an application for change to a water right, is required to make a tentative determination of extent and validity of the claim or right. This is necessary to establish whether the claim or right is eligible for change. *R.D. Merrill v. PCHB* and *Okanogan Wilderness League v. Town of Twisp*.

RCW 90.03.386(3) requires a municipal water supplier to apply cost-effective water conservation measures as part of its water system planning. The water supplier must also evaluate the effects of delaying the use of inchoate water rights before it may increase use of those inchoate rights. RCW 90.03.320 requires Ecology to consider the public water supplier's use of conserved water when establishing a surface or ground water right construction schedule.

RCW 90.03.386(2) states that a municipal water supplier may change its service area through the water system plan approval process. As long as the municipal water supplier is in compliance with the approved plan, the place of use for the water right is the service area of the plan.

RCW 90.44.100 allows Ecology to amend a ground water permit to: (1) allow the user to construct a replacement or additional well at a new location outside of the location of the original well, or to (2) change the manner or place of use of the water, if:

- The additional or replacement well taps the same body of public ground water as the original well. RCW 90.44.100(2)(a),
- Where a replacement well is approved, the user must discontinue use of the original well and properly decommission the original well. RCW 90.44.100(2)(b),
- Where an additional well is constructed, the user may continue to use the original well, but the combined total withdrawal from all wells shall not enlarge the right conveyed by the original permit or certificate. RCW 90.44.100(2)(c),
- Other existing rights shall not be impaired. RCW 90.44.100(2)(d).

When changing or adding points of withdrawal to groundwater rights (RCW 90.44.100) the wells must draw from the *same body of public groundwater*. Indicators that wells tap the *same body of public groundwater* include:

- (a) Hydraulic connectivity.
- (b) Common recharge (catchment) area.
- (c) Common flow regime.
- (d) Geologic materials that allow for storage and flow, with recognizable boundaries or effective barriers to flow.

## INVESTIGATION

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This application was evaluated using Department of Ecology records of surface and groundwater rights, claims, and water well reports on file.

Additionally, hydrogeologic descriptions provided by J.V. Tracy in USGS Open File Report 77-647 (1978) and by Blakemore Thomas in USGS Water Resource Investigation Report 95-4026 (1995) were used. Local hydrologic information is gained from two Robinson Noble Reports, North Beach Water District Wiegardt Well 1 Construction and Testing Report (2013) and North Beach Water District Construction and Testing of the Wiegardt Wellfield (2014). These publications provide significant description of the regional setting and the aquifer-specific characteristics in the area of this investigation.

### Project Location and Site Description

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NBWD is a municipal water purveyor (Department of Health ID 63000) serving a 7.25-square-mile area on the Long Beach Peninsula with a 5.7-square mile area to the south identified as future service area. The service area occupies the middle third of the sand spit that forms the Long Beach peninsula.

*See Figure 1*

The proposed points of withdrawal, Wiegardt Wells 1, 2, and 3 have been installed and are ready to be connected to the NBWD distribution system. The District also plans on drilling up to 3 additional wells in this wellfield at some point in the future but will add them to this water right administratively through a Showing of Compliance (RCW 90.44.100(3)) since they will be drilled in the same quarter-quarter section as Wiegardt Wells 1, 2, and 3.

### Site Visit

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On May 1, 2015, Mike Krautkramer performed a field investigation in support of this *Application for Change*. Mr. Krautkramer visited the well sites of Wiegardt Wells 1, 2, and 3, and the surrounding area within a one-half mile radius. In addition, a visit was made to the existing points of withdrawal under the subject water right (South Wells 1 and 2) which are scheduled to be decommissioned once this change is authorized.

The potential for impact to the wetland west of the Wiegardt Wellfield was determined to be equivalent for the existing and proposed points of withdrawal. This was determined by walking the pertinent portion of the mapped wetland boundary with consideration of the confined nature of the aquifer tapped by the wells.

A windshield survey of the area within ½ mile of the Wiegardt Wells was conducted to identify nearby private water wells and compare to Ecology records.



### History of Water Use

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The subject water right was issued in August 1972 to the Ocean Bay Water Company, a predecessor of NBWD. The right has been used since that time as a primary source for the regional purveyor in a manner consistent with RCW 90.03.015. Total reported Water District use for the year 2013 (Most recent year reported) was 350 acre-feet per year (af/yr) of which 24 af/yr was produced under the subject water right. Production from the wellfield has been stable since 2010. The current instantaneous capacity of the District's operational wells is 915 gpm (Gray & Osborne, Inc., 2015).

### Proposed Use

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Although GWC G2-00174 was issued for community domestic supply, based on the criteria in RCW 90.03.015, NBWD is defined as a municipal water purveyor as a matter of law. The use of the water produced from the new points of withdrawal will remain as municipal water to supply the service area of the NBWD.

The water system Plan (Gray & Osborne, Inc., 2015) indicates a future demand of 364 af/y by 2035. The future service area identified in the plan will extend southward approximately 2.5 miles to Cranberry Road and encompass the full width of the peninsula along its entire length. Existing water rights are adequate to provide the projected demand.

### Other Rights Appurtenant to the Place of Use

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North Beach Water District holds 6 water rights per their current water right assessment as presented in the March 2015 Water System Plan. These are:

- G2-00174, priority date 12/15/1969, for 500 gpm Qi and 168 af/y Qa (subject right)
- G2-00759, priority date 7/14/1965, for 200 gpm Qi and 320 af/y Qa
- G2-21399, priority date 8/23/1973, for 100 gpm Qi and 160 af/y Qa (32 af/y non-additive)
- G2-25737, priority date 10/22/1980, for 130 gpm Qi and 140 af/y Qa (all non-additive)
- G2-27073, priority date 3/16/1987, for 105 gpm Qi and 252 af/y Qa (all non-additive)
- G2-29907, priority date 2/10/2000, for 65 gpm Qi and 80 af/y Qa

The total allocation held by the District is 1,100 gpm Qi and 681 af/y cumulative Qa.

Although groundwater claims have been filed in Section 33, these properties lie within NBWD's service area (as defined in the March 2015 System Plan) and are now likely being served by the District. All available information regarding permits indicates they are for single-domestic-use shallow wells that will not be impaired by the subject water right change which draws from a deeper, semi-confined groundwater regime.

### Hydrologic/Hydrogeologic Evaluation

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The District gets its water from wells completed near the bottom of the Water Table Aquifer on the peninsula (as defined in USGS publications). This aquifer consists of the upper 200 feet of the sediments that form the spit.

The regional geology/hydrogeology of the peninsula was described by J.V. Tracy in Open File Report 77-647 and again in 1995 by Blakemore Thomas in Water Resource Investigation Report 95-4026. These reports describe a hydrogeologic sequence that consists of a thick deposit of two sand units. The lower unit is gray fine sand deposited as near-shore ocean bottom. The upper unit is brown fine sand transported to the Pacific Ocean from the Columbia River and deposited along the Long Beach Peninsula

by longshore-drift. Both sand units are typically above a thick clay unit, which is encountered at a depth of about 200 feet in most deep wells. The sand above the clay is referred to as the Water Table Aquifer by both Tracy and Thomas. A deeper sand and gravel aquifer exists below the clay at depths of about 260 feet. Only a few wells have been drilled to this unit so its lateral extent is speculative in most areas. The full sequence of unconsolidated materials are considered a single body of public groundwater.

The water table aquifer (fine sand aquifer) is the primary water source on the peninsula. The aquifer is described regionally as a fairly uniform unconfined system (Thomas, 1995). However, well-test data show the aquifer behaves more like a confined aquifer due to subtle changes in the amount of silt/clay within the sand layers making the hydraulic conductivity variable. The vertical hydraulic conductivity is significantly lower than the horizontal hydraulic conductivity causing the response to pumping to be as if the sand is confined. For the sake of this investigation, a steady-state, water-table condition is used when considering the potential for impacts to surface water features and the parameter values provided from well tests of the North Beach Water System are used in assessing impacts to other groundwater users. This approach makes the assessment of both surface-water and well-interference aspects conservative.

Water level elevations in the center of the peninsula near the locations of the Weigardt wells are 8 to 14 feet above sea level depending on the season. Water levels fall to about 2 feet above sea level at both the Pacific and Willapa Bay shore lines.

#### Site Conditions

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The water table aquifer is the source for the existing points of withdrawal (South Wells 1 and 2) and proposed points of withdrawal (Wiegardt Wells 1, 2, 3). (Figure 1)

The northernmost of the Wiegardt wells (Wiegardt Well 1) is 700 feet south of South Well 2 and 900 feet west of South Well 1. Wiegardt Well 2 is 150 feet south of Wiegardt Well 1 and Well 3 is another 155 feet south of Well 2. South wells 1 and 2, and Wiegardt wells 1, 2 and 3 are completed at similar depths and draw water from the same (water table) aquifer and therefore are in the same body of public groundwater.

The completion details of the South Wells and the 3 wells of the new Wiegardt wellfield are provided below:

- South Well 1 is an 8-inch well drilled to 56 feet and completed between 41 and 56 feet in the water table aquifer. The well has an installed capacity of 30 gpm as reported in the 2015 system plan.
- South Well 2 is an 8-inch well drilled to 100 feet and completed between 85 and 100 feet in the water table aquifer. The well currently has a pumping capacity of 60 gpm as reported in the 2015 system plan.
- Wiegardt Well 1 is an 8-inch well drilled to 149 feet and completed between 118 and 138 feet in the water table aquifer. The well was tested at 150 gpm and is rated to produce between 125 and 200 gpm depending on pumping conditions. It is rated tentatively as a 150 gpm source in the 2015 system plan.
- Wiegardt Well 2 is an 8-inch well drilled to 150 feet and completed between 120 and 141 feet below land surface in the water table aquifer. The well was tested at 150 gpm and is listed as a tentative 150-gpm source in the 2015 system plan.
- Wiegardt Well 3 is an 8-inch well drilled to 172 feet and completed between 121 and 142 feet below land surface in the water table aquifer. The well was tested at 150 gpm and is listed as a tentative 150-gpm source in the 2015 system plan.

An extensive 72-hour test was performed once the wellfield was equipped to record the drawdown and recovery responses to pumping at Wiegardt Well 3. The distance-drawdown data indicate an aquifer transmissivity of 63,000 gpd/ft and a storage coefficient of 0.04 which suggests semi-confined aquifer conditions. The storage coefficient reduces to 0.038 after three days of pumping.

Distance-drawdown relationships defined in the Water District's wellfield report (Robinson Noble, June 2014) indicates a drawdown of near zero at distance of 1,000 feet after three days of continuous pumping.

The test response suggests that potential impacts to other users and surface water bodies (wetlands) on the peninsula is sufficiently small that it does not constitute a potential impairment or adverse impact.

The results of the test concluded production is sufficient to provide the recommended production from the Wiegardt Wells.

### Impairment Considerations

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#### ***Impairment, Qualifying Ground Water Withdrawal Facilities, and Well Interference***

Water right changes have greatest potential to affect wells completed in the same aquifer near the new point of withdrawal.

WAC 173-150-060 specifies that only impacts to "qualifying withdrawal facilities" fit the legal definition of impairment. This definition means wells can be affected as long they are not impaired. Qualifying withdrawal facilities are wells completed in the same aquifer as the new point of withdrawal. The well must span the aquifer's entire saturated thickness and the pump elevation must allow variation in seasonal water levels.

There are 62 water well reports on record in Ecology's well log database for Section 33, T12N/R11W. All but two are small diameter jetted or driven wells (sand-point wells) between seven and 35 feet deep. The other two are the Coos Bay Development well (drilled in 1953) and Ray Robertson (drilled in 1974 and 112-foot deep, municipal well within Ocean Park).

Ecology's WRTS database shows no water right certificates or permits within 2,000 feet of the proposed Wiegardt wellfield. Since the test data from the 3-day wellfield test shows drawdown reaches zero at a distance of approximately 1,200 feet, interference drawdown beyond 2,000 feet will be unlikely.

Ecology's WRTS database also lists 123 water right claims in Section 33. The claimed uses are generally single domestic supply with some yard irrigation. A few claims specify irrigation, but even those are associated small lots (e.g. city lot type parcels). Bill Neal, NBWD manager, stated that most, if not all claims are situated in NBWD's service area which is supported by observations made in the field.

This proposed change is not expected to affect area users. The Weigardt wellfield are roughly 1,000 feet south or west from South Wells 1 and 2 and the wells are in a semi-confined aquifer so impacts will only shift slightly southward. No significant change in impact is anticipated.

***Impacts to surface water***

There is no evidence that this change will result in adverse impacts to the wetlands or to any other surface water features. The proposed and existing points of withdrawal are only 1,000 feet apart and completed in the same aquifer.

***Potential for seawater intrusion***

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The Wiegardt wellfield is situated along a north-south line that is roughly centered on the peninsula. The wells are 3,500 feet from the Bay and 4,000 feet from the Pacific.

NBWD's south wellfield has been operating for several decades without seawater intrusion. The aquifer's basal clay means that lateral groundwater movement from either the ocean or Willapa Bay is the only avenue for seawater intrusion to occur. A recharge analysis provided as part of the Wiegardt Wellfield Report (Robinson and Noble, 2014) shows that even with conservatively low recharge estimates, there is sufficient water within this aquifer to support the proposed withdrawals.

Water quality data collected during the pump test showed stable chloride levels. Specific conductivity, pH, and temperature were monitored 7 times throughout the 72-hour pump test. (Robinson Noble, 2014).

Although testing and analyses indicate seawater intrusion is not occurring at this location, it is recommended semi-annually testing be so that if chloride levels begin to rise then mitigative actions can be taken. Mitigative actions can consist of reducing the instantaneous rate being pumped or pumping only at low tides.

***Public Interest Considerations***

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Nothing associated with the requested change is contrary to the public interest as discussed in RCW 90.03.

***Consideration of Protests and Comments***

No protests were filed against this application.

***Conclusions***

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In accordance with Chapter 90.03 RCW, I conclude:

- 1) The water is physically and legally available,
- 2) The water will serve a beneficial use,
- 3) Existing water rights will not be impaired,
- 4) The issuance of the change will not be contrary to the public interest

***RECOMMENDATIONS***

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Based on the above investigation and conclusions, I recommend that this request for a water right change be approved in the amounts and within the limitations listed below, subject to the provisions listed at the beginning of this report.

**Purpose of Use and Authorized Quantities**

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The amount of water recommended is a maximum limit and the water user may only use that amount of water within the specified limit that is reasonable and beneficial:

$Q_i$  500 gpm

$Q_a$  168 acre-feet per year

For Municipal Supply

Weigardt Wells 1 and 2 in the SW $\frac{1}{4}$ , NE $\frac{1}{4}$ , Section 33, Township 12 North, Range 11W.W.M.

Weigardt Well 3 in the SE $\frac{1}{4}$ , NE $\frac{1}{4}$ , Section 33, Township 12 North, Range 11W.W.M.

***Place of Use***

As described on Page 1.

### Selected References

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Gray & Osborne, Inc., 2015, North Beach Water District, Pacific County, Washington, Water System Plan, May 2015

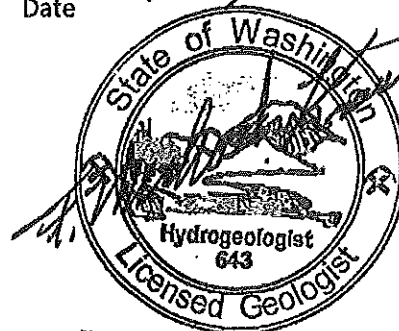
Tracy, J.V., 1978, Ground-water resources of the North Beach Peninsula, Pacific County, Washington, USGS Open File Report 77-647

Thomas, Blakemore E., 1995, Ground-water flow and quality in the sand aquifer of Long Beach Peninsula, Washington, USGS Water Resources Investigations Report 95-4026

Robinson Noble, Inc., 2013, North Beach Water District Wiegardt Well 1 construction and testing report

Robinson Noble, Inc., 2014, North Beach Water District construction and testing of the Wiegardt Wellfield

Reported by: F. Michael Krauthamer 8/13/14  
Report Writer Date



F. MICHAEL KRAUTKRAMER

Reported by: F. Michael Krauthamer 8/13/14  
Hydrogeologist Date

Reviewed by: Tammy Hall 10/15/2015  
Tammy Hall, Water Resources Program Date

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